

**NOTES ON A COLLECTION OF ANCHOVIES FROM HAVANA AND KEY WEST,
WITH AN ACCOUNT OF A NEW SPECIES (*STOLEPHORUS EURYSTOLE*)
FROM WOOD'S HOLL, MASS.**

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The present paper is based on a large collection of Anchovies, made by Professor Jordan at Havana, Cuba, and at Key West, Fla. We recognize two species of *Stolephorus* in this collection from Havana. Both of these species occur in the collection from Key West, as also *Stolephorus miarchus*, a species hitherto recorded only from Mazatlan and Panama on the Pacific Coast.

We are indebted to Professor Jordan for the use of his library and for valuable suggestions.

1. *Stolephorus perfasciatus* (Poey) Swain and Meek.

Engraulis perfasciatus Poey, Memorias Cuba, ii, 313, 1858 (Havana); Poey, Syn. Pisc. Cuba, 421, 1868 (Havana) (not of Poey, Synopsis, p. 460); Günther, Cat. Fishes Brit. Mus., vii, 391 (Cuba) (not of Swain, Bull. U. S. Fish Comm., 1882, 55, nor of Jor. and Gilb., Syn. Fish. N. A., 273).

Head 4 to $4\frac{1}{2}$ in length to base of caudal. Depth $5\frac{3}{4}$ to $6\frac{1}{2}$. Dorsal 12 to 13. Anal 14 to 16.

Body oblong, somewhat compressed. Snout shorter than eye, compressed and pointed. Top of head with a slight keel. Eye about $3\frac{1}{2}$ in head. Mouth slightly oblique. Maxillary and lower jaw finely toothed. The posterior end of maxillary rounded, not extending quite to margin of preopercle. Gill-rakers numerous, rather weak and toothed on under side, the longest about $1\frac{1}{3}$ in eye. Pectoral fins about $1\frac{3}{4}$ in head, their tips not reaching ventrals by about diameter of eye. Ventrals short, their tips not reaching anal by length of fin. Caudal forked. Origin of anal below last ray of dorsal. Origin of dorsal midway between root of caudal and pupil. Scales deciduous. Color as in *Stolephorus browni*, without dark punctulations except on base of caudal and often on base of anal. Sides with a well-defined silvery band, its width about $\frac{3}{4}$ eye, being rather narrower than usual in *S. browni*.

This description is taken from numerous well-preserved specimens, about $2\frac{1}{4}$ inches in length, obtained by Prof. Jordan with

a seine at Key West. Five specimens, the largest about 3 inches in length, were also obtained at Havana.

Stolephorus per fasciatus Jordan and Gilbert, Syn. Fishes North America, p. 273, and Swain, Bull. U. S. Fish Comm., 1882, p. 55, is a different species, apparently without a name. It differs chiefly in a greater number of anal rays, and in having a wider and less silvery lateral band. No specimen of the true *per fasciatus* is known to reach the size of the specimen from Wood's Holl, Mass. This species from Wood's Holl may stand as *Stolephorus eurystole* Swain and Meek. Specimens of this species, perhaps mixed with others, have been distributed by the U. S. National Museum under the following numbers, 19,003 to 19,017. The one originally described by Mr. Swain and by Jordan and Gilbert was destroyed in the burning of the Museum of the Indiana University, but others like it exist in the U. S. National Museum.

2. *Stolephorus browni* (Gmelin) Jordan and Gilbert.

This species is by far the most common of the Anchovies, both at Key West and Havana. For synonymy and description see Swain, Bull. U. S. Fish Comm., 1882, 56. *Engraulis per fasciatus* Poey, Syn. Pisc. Cuba, 1868, 460, is apparently not a true *per fasciatus*, and is probably this species.

3. *Stolephorus miarchus* Jordan and Gilbert.

Stolephorus miarchus Jordan and Gilbert, Proceed. U. S. Nat. Mus., 1881, 334 (Mazatlan).

Four specimens from Key West. We are unable to detect any discrepancy between these specimens and the descriptions published by Jordan and Gilbert of the types of this species from Mazatlan.

4. *Cetengraulis brevis* (Poey) Swain and Meek.

Engraulis brevis Poey, Repert. Fis. Nat. Cuba, i, 379, 1866 (Cuba); Poey, Syn. Pisc. Cuba, 422, 1868 (Cuba); Günther, Cat. Fishes Brit. Mus., vii, 383, 1868 (no specimen).

Head in length to base of caudal, $3\frac{1}{2}$ ($4\frac{1}{8}$ in total); greatest depth 3 ($3\frac{2}{5}$); about 40 scales in lateral line, and 11 scales in a transverse series beginning at origin of anal fin. Anal 23 to 25. Dorsal 15.

Body deep, compressed; belly compressed, not serrate. Head rather short. Snout short and sharply pointed, $1\frac{2}{3}$ in eye, which

equals the width of interorbital area and is contained 4 times in the length of head.

Mouth somewhat oblique; mandible extending little in front of anterior part of orbit. Maxillary slender, very finely toothed on posterior two-thirds only, not quite reaching root of mandible. Lower jaw toothless. Gill-rakers close-set, longer than diameter of eye, $3\frac{1}{2}$ in head. Cheeks triangular, longer than high.

Scales rather firm, not caducous. Pectoral fin not reaching base of ventral, 2 in head. Ventrals short, 3 in head. Caudal deeply forked, minutely scaled, $1\frac{1}{2}$ in head. Base of anal contained $1\frac{2}{5}$ times in head. Dorsal and anal fins with dense basal sheaths, which entirely hide the fin when depressed.

Color in spirits plain silvery on sides, darker above. A dark band beneath the scales about as broad as eye, extending from upper angle of opercle to caudal.

This description is based on specimens about $4\frac{1}{2}$ inches in length, obtained by Prof. Jordan in the Havana Market.